

MicroC[®] 4225

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: MicroC[®] 4225 **Publication Date:** March 8, 2024
Product Code: NA **Replaces:** January 15, 2021
Product Use: A reducing agent for biological processes

Supplier Information:

Environmental Operating Solutions, Inc Phone: 508-743-8440
53 Portside Drive Fax: 844-308-5537
Pocasset, MA 02559 Website: www.microc.com

EMERGENCY TELEPHONE NUMBER: **CHEMTREC** **800-424-9300**

2. HAZARDS IDENTIFICATION

Hazard Statement: WARNING !

May cause skin and eye irritation

OSHA and GHS Classification Category: Skin – Category 2 Eye – Category 2B

Precautionary Statement:

Wear protective gloves/eye protection. Avoid breathing dust/mist. Wash affected areas with water. Seek medical attention if irritation persists. Dispose of contents/containers in accordance with local, state and federal regulations.

Note: When vaporized, glycerin mist may cause irritation of the respiratory tract.

Potential Health Effects

Routes of Exposure	Ingestion, inhalation, skin contact, eye contact
Eyes	May cause minor irritation
Skin	May cause minor irritation
Inhalation	None known
Ingestion	May be harmful if swallowed in large quantities



3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	% by Weight
Glycerin; glycerol	56-81-5	70-74%
Water	7732-18-5	22-26%
Sodium Chloride	7647-14-5	4-6%
Phosphoric Acid	7664-39-2	0-3%
Sodium Hydroxide	1310-73-2	0-3%
Methanol	67-56-1	< 1%

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4. FIRST AID MEASURES

Eye Contact	Immediately flush eyes thoroughly with plenty of water for 15 minutes and consult a physician if irritation persists.
Skin Contact	Remove contaminated clothing and wash affected area with water and soap. Consult physician if irritation develops
Inhalation	Remove individual to fresh air. Seek medical attention if breathing problems persist
Ingestion	Do not induce vomiting. Rinse mouth thoroughly. Seek medical attention.
General Advice	If individual feels unwell following the exposure to the product consult a physician immediately. Present this Safety Data Sheet to the doctor in attendance
Note to physician	Treat patient symptomatically

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA and NFPA)	Non-flammable Material
Protection of Firefighters:	Wear suitable protective equipment. Wear self contained breathing apparatus if necessary
Extinguishing Media	Use equipment appropriate to the main source of the fire. Water spray, alcohol foam, dry chemical or CO2. Water or alcohol foam may cause frothing
Specific hazards arising from the chemical	Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Spills	Keep unnecessary personnel away from spill. Use personal protective equipment. Ventilate area of leak or spill. Avoid breathing vapors and mist.
Methods for Containment	Eliminate all sources of ignition. Stop flow of material if safe to do so. Dike spilled material. Absorb spill with inert absorbent material. Sand, earth and vermiculite are suitable absorbent materials.
Environmental Precautions	Prevent further leakage. Contain spill if safe to do so. Do not let product enter storm drains if possible.

7. HANDLING AND STORAGE

Precautions for Safe Handling	See other relevant sections of this SDS. Avoid contact with skin and eyes. Avoid breathing mist. Use with adequate ventilation. Do not handle and store near open flames, high heat or sources of ignition.
Storage	Keep containers closed when not in use. Minimize evaporative losses. Keep away from ignition sources.
Incompatible Materials for Storage	None known

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

INSUFFICIENT DATA ON MIXTURE. DATA ON INDIVIDUAL COMPONENTS PROVIDED BELOW

Component	Concentration in Product	ACGIH TLV	OSHA TABLE Z-1 Limits for Air Contaminants	NIOSH
Glycerin CAS No: 56-81-5	70-74% w/w	Form: Glycerin Mist TWA: 10 mg/m3	Form: Total Dust PEL: 15 mg/m3 Form: Respirable Fraction PEL: 5 mg/m3	Insufficient Data on Glycerin Mist
Phosphoric Acid CAS No: 7664-38-2	0-3% w/w		PEL: 1 mg/m3	TWA: 1 mg/m3
Sodium Hydroxide CAS No: 1310-73-2	0-3% w/w		PEL: 2 mg/m3	TWA: 2 mg/m3
Methanol CAS No: 67-56-1	< 1 % w/w	TWA: 260 mg/m3	PEL: 260 mg/m3	TWA: 260 mg/m3

Engineering Controls

Use proper equipment and storage conditions to control airborne levels below recommended exposure limits.

Personal Protective Equipment

Eye Protection:

Use normal eye protection practices such as safety glasses with side shields. Use chemical goggles if risk of splashing is high.

Skin Protection

Handle with chemical resistant gloves. Dispose of contaminated gloves after use. Nitrile gloves recommended.

Respiratory Protection

If workers could be exposed to concentrations above the exposure limits in Section 8, use a full face respirator with multipurpose combination cartridges.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	Flash Point	None to Boil (ASTM D93)
Color	Light brown	Boiling Point	Not determined
Odor	Musty – Sweet Odor	Evaporation Rate	Not determined
Odor Threshold	Not determined	UEL/LEL	Not determined
		Flammability (solid, gas)	Not determined
pH	3.0-6.0	Vapor Pressure	Not determined
Solubility in Water	Highly soluble in water	Vapor Density	Not determined
		Relative Density	Not Determined
Bulk Density	10.2 lbs/gal	Partition Coefficient	Not determined
Specific gravity	1.23@ 20°C	Autoignition Temperatures	
		Decomposition	
Viscosity	45 cPs @ 20C	Temperature	Not determined

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10. STABILITY AND REACTIVITY

Reactivity	Avoid contact with oxidizing agents (e.g. nitric acid, peroxides, chromates)
Chemical Stability	Stable under normal storage conditions
Possibility of hazardous reactions	None known
Conditions to Avoid	Heat, flames, sparks. Contact with oxidizing agents
Incompatible Materials	None known
Hazardous Decomposition Products	Oxides of carbon under high heat

11. TOXICOLOGY

INSUFFICIENT DATA ON MIXTURE. DATA ON INDIVIDUAL COMPONENTS PROVIDED BELOW

Eye Contact	The components in this product may result in mild eye irritation from contact with liquid or vapors. Symptoms include redness, swelling, watering.
Skin Contact	The components in this product may result in mild skin irritation. Symptoms include redness, itching, burning, dermatitis.
Inhalation	Breathing high mist concentrations may be harmful. Inhalation can cause irritation of the throat and lungs.
Ingestion	Ingestion of this product may result in nausea, vomiting and diarrhea. Aspiration into the lungs can cause damage and inflammation to the lungs.
Target Organs	Lungs, Kidneys
Prolonged Exposure	Symptoms include nausea, headache, vomiting

Component	Concentration in Product	Acute Toxicity	Carcino-genicity	Muta-genicity	Reproductive Toxicity
Glycerin CAS No: 56-81-5	70-74% w/w	Dermal LD50 = > 10,000 mg/kg (Rabbit) Inhalation LC50 = > 570 mg/m ³ 1 hr (Rat) Oral LD50 = 12,600 mg/kg (Rat)	Not listed by ACGIH, IARC, NIOSH, NTP, OSHA	No data available	No data available
Phosphoric Acid CAS No: 7664-38-2	0-3% w/w	Dermal LD50 = >1260-3160 mg/kg (Rabbit) Inhalation LC50 = 61-1689 mg/m ³ 1 hr (Mouse, rat, rabbit) Oral LD50 = 1530 mg/kg (Rat)	Not listed by ACGIH, IARC, NIOSH, NTP, OSHA	No data available	No data available
Sodium Hydroxide CAS No: 1310-73-2	0-3% w/w	Dermal LD50 = 12,894 mg/kg (Rabbit) Inhalation LC50 = Not Available Oral LD50 = > 90,000 mg/kg (Rabbit)	Not listed by ACGIH, IARC, NIOSH, NTP, OSHA	No data available	No data available
Methanol CAS No: 67-56-1	< 1 % w/w	Dermal LD50 = 15,800 mg/kg (Rabbit) Inhalation LC50 = 64,000 mg/m ³ 4 hr (Rat) Oral LD50 = 5,600 mg/kg (Rat)	Not listed by ACGIH, IARC, NIOSH, NTP, OSHA	No data available	No data available

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12. ECOLOGICAL INFORMATION

Ecotoxicity	Glycerin: 96 hr LC50: 51,000-57,000 mg/L (Rainbow Trout), > 5000 mg/L Goldfish Methanol: 96 hr LC50: > 15,400-29,400 mg/L (Fish)
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

This product as supplied is not classified as a RCRA hazardous waste according to 40 CFR 261. However it should be fully characterized prior to disposal as contamination with other materials may subject it to hazardous waste regulations. RCRA requires the user of the product to determine whether the product meets RCRA criteria for hazardous waste. Always consult with local, state and federal regulations prior to disposal.

14. TRANSPORTATION INFORMATION

US Domestic DOT	Not Regulated
Shipping Name	Glycerin; Glycerol
IMDG	Not dangerous goods
IATA	Not dangerous goods
Marine pollutant	No

15. REGULATORY INFORMATION

United States

Toxic Substances Control Act

The components of this product are listed on the TSCA Inventory of Existing Chemical Substances

Section 302 (EHS) TPQ	Not applicable
Section 304 (EHS) TPQ	Phosphoric Acid (5000 #'s), Sodium Hydroxide (1000 #'s)

SARA Section 311/312 Hazard Categories

Acute - NO
Chronic – NO
Physical - None
Pressure Hazard - NO
Fire Hazard - NO

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SARA Section 313

This product may contain trace amounts of a chemical that is subject to reporting requirements of SARA
Methanol CAS # 67-56-1 Typical % Weight in Product 0.0-0.10%

CERCLA

This product may contain trace amounts of a chemical that is subject to reporting requirements of CERCLA
Methanol RQ # 5,000. Typical % Weight in Product 0.0-0.10%

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None

State Right to Know Regulations

California – Proposition 65	WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm: CAS# 67-56-1 – Methanol
Massachusetts Right to Know	Glycerin, Methanol, Phosphoric Acid, Sodium Hydroxide
Minnesota Hazardous Substances List	Glycerin mist, Methanol
New Jersey Right to Know	Methanol, Phosphoric acid, sodium hydroxide
Pennsylvania Right to Know	Glycerin, Methanol, Phosphoric Acid, Sodium Hydroxide
Rhode Island Right to Know	Glycerin, Methanol, Sodium Hydroxide

16. ADDITIONAL INFORMATION

MSDS REVISION STATUS: March 8, 2024 | Replaces: January 15, 2021

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. WE BELIEVE THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF ITS PUBLICATION DATE, BUT MAKE NO WARRANTY THAT IT IS. IF THIS MSDS IS MORE THAN THREE YEARS OLD YOU SHOULD CONTACT THE SUPPLIER TO MAKE CERTAIN THAT THE INFORMATION IS CURRENT.